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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/382,702

08/24/1999

PETER ANTHONY HOCHSTEIN

9100.2881 REI

5578

25099

7590

08/12/2008

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EXAMINER

VU, BAO Q

ART UNIT

PAPER NUMBER

2838

MAIL DATE

DELIVERY MODE

08/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/382,702	HOCHSTEIN, PETER ANTHONY	
	Examiner	Art Unit	
	Bao Q. Vu	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-24, 28, 32, 37, 38, 41, 42 and 44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-24, 28, 32, 37-38, 41-42, 44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

In light of some newly discovered reference the allowance is being withdrawn and a non-final rejection is being issued.

Reissue Applications

1. Applicant is reminded of the continuing obligation under 37 CFR 1.178(b), to timely apprise the Office of any prior or concurrent proceeding in which Patent No. 5,661,645 is or was involved. These proceedings would include interferences, reissues, reexaminations, and litigation.

Applicant is further reminded of the continuing obligation under 37 CFR 1.56, to timely apprise the Office of any information which is material to patentability of the claims under consideration in this reissue application.

These obligations rest with each individual associated with the filing and prosecution of this application for reissue. See also MPEP §§ 1404, 1442.01 and 1442.04.

2. The reissue oath/declaration filed with this application is defective because the error which is relied upon to support the reissue application is not an error upon which a reissue can be based. See 37 CFR 1.175(a)(1) and MPEP § 1414.

The oath recites that claims 5 and 6 are not in independent form. Presently these claims have been subsequently been cancelled so no error exist now.

3. Claims 7-24,28, 32,37-38, 41-42, 44 are rejected as being based upon a defective reissue oath under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the oath is set forth in the discussion above in this Office action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 8, 10, 11, 17, 18, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USP 5,463,280) in view of Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller in view of Applicant Prior Art (APA) and further in view of Gleason et al. (USP 5,446,440). Johnson discloses the claimed invention (see figure 8 below) an AC input (102), a rectifier (108), a switching power supply (106) for use with an LED diode array (110), except for the use of series-parallel LED array, a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

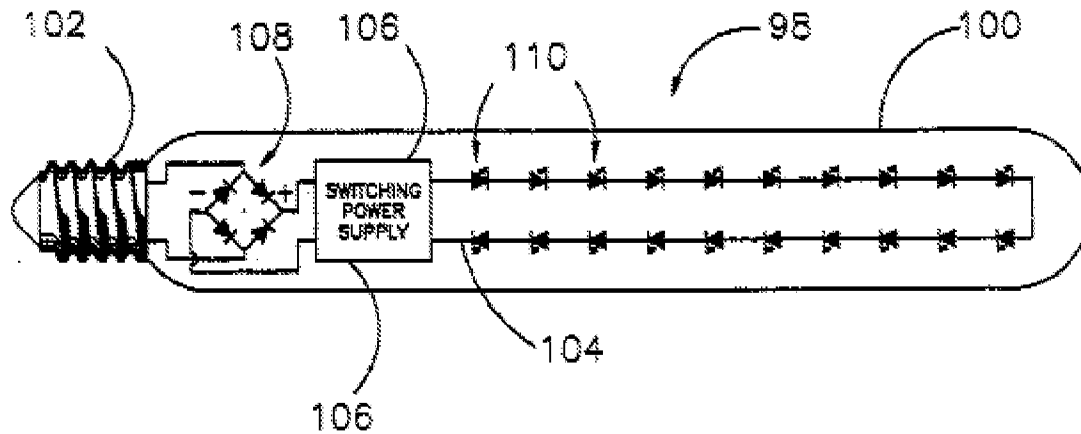
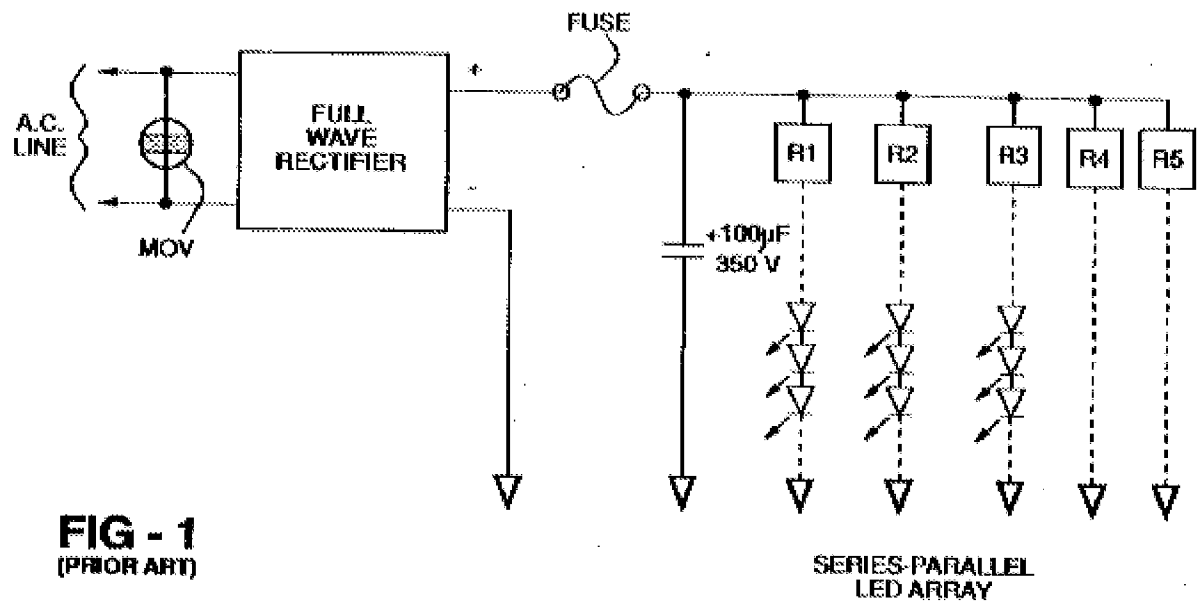


Fig. 8

The Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller discloses that it is known in the art to have a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

APA discloses the use of series-parallel LED array. See figure 1 below.



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It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller since the Power Supply Cookbook teaches that the power factor correction circuitry are intended to increase the conduction angle of the rectifiers and to make the AC input current waveform sinusoidal and in phase with the voltage waveform. This in effect causes all the power drawn from the power line is real power not reactive power, thereby power drawn from the power line is much lower than that is drawn by the capacitive input circuit conventionally used. (See 4th paragraph page 195 Power Supply Cookbook) Power Supply Cookbook also teaches a pulse width modulator for use with a power supply circuit to operate the power transistor in both saturated and cutoff states, which is a more efficient way of operation than that of the linear regulator since the power device loss is kept to a minimum. (See 4th paragraph page 25 Power Supply Cookbook)

It further would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide circuit reliability and redundancy in the case, one of the LED fails, the other LED's from the LED array would light/work in its place.

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Johnson, Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller, Applicant Prior Art (APA) discloses the claimed invention except for having a battery back up, connected to rectifier with a switch over circuit. Gleason discloses that it is known in the art to provide a battery back up (212), connected to rectifier (166) with a switch over circuit (178). (See figure below.) It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide the battery back up (212), connected to rectifier (166) with a switch over (178) circuit of Gleason with the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide an

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emergency system with low operation and maintenance costs.

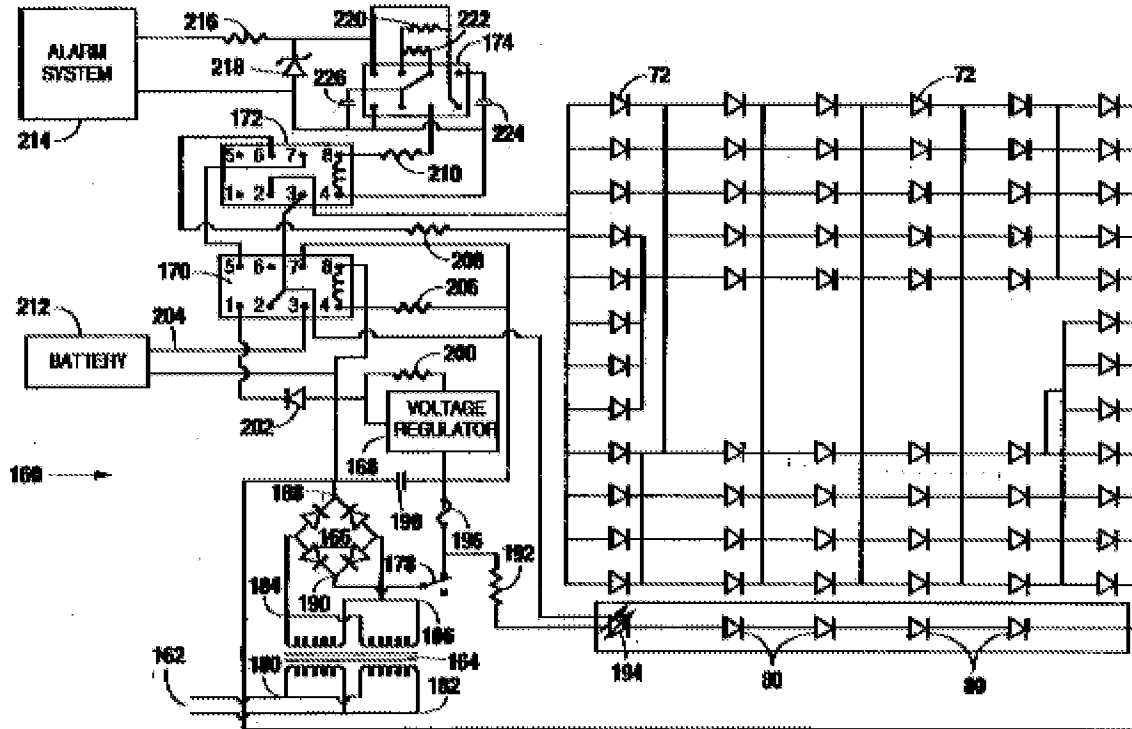


Fig. 6

6. Claim 9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USP 5,463,280) in view of Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller in view of Applicant Prior Art (APA) in view of Gleason et al. (USP 5,446,440) and further in view of Bavaro et al. (USP 5,734,229). Johnson, Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller, Applicant Prior Art (APA) and Gleason discloses the claimed invention except for the use of a restoration/delay circuit. Bavaro discloses that it is known in the art to provide a restoration/delay circuit. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide a restoration/delay circuit of Bavaro with the battery back up (212), connected to rectifier (166)

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with a switch over (178) circuit of Gleason with the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide a safe and reliable way to provide emergency back up lighting.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USP 5,463,280) in view of Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller in view of Applicant Prior Art (APA) in view of Gleason et al. (USP 5,446,440) and further in view of Bavaro et al. (USP 5,734,229) in view of Hildebrand (USP 5,075,601). Johnson, Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller, Applicant Prior Art (APA) and Gleason discloses the claimed invention except for the use of the clamp circuit. Hildebrand discloses that it is known in the art to provide a clamp circuit. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide the clamp circuit of Hildebrand with the battery back up (212), connected to rectifier (166) with a switch over (178) circuit of Gleason with the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide an adaptive line loading circuit or clamp that switches itself in or out of the circuit as needed.

8. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USP 5,463,280) in view of Power Supply Cookbook and the Motorola data sheet for the MC

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34261 controller in view of Applicant Prior Art (APA) and further in view of Head (USP 4,682,083).

Johnson discloses the claimed invention (see figure 8 below) an AC input (102), a rectifier (108), a switching power supply (106) for use with an LED diode array (110), except for the use of series-parallel LED array, a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

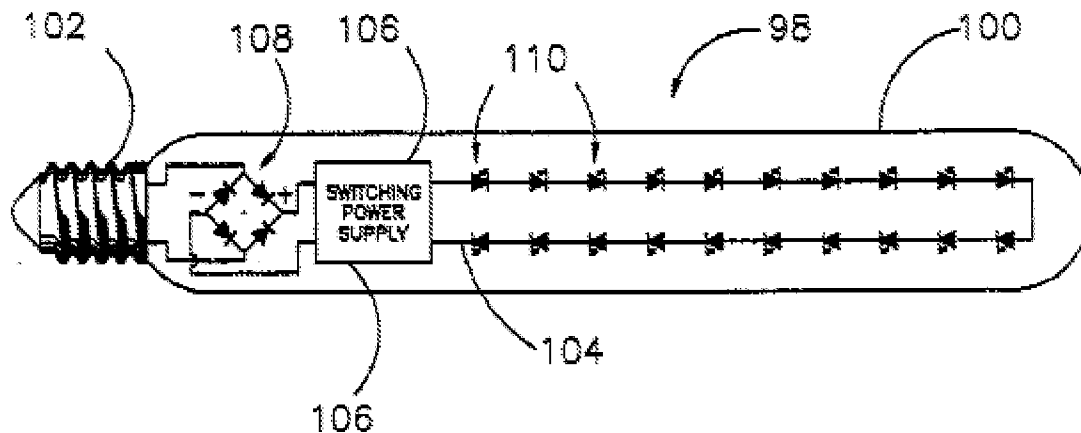
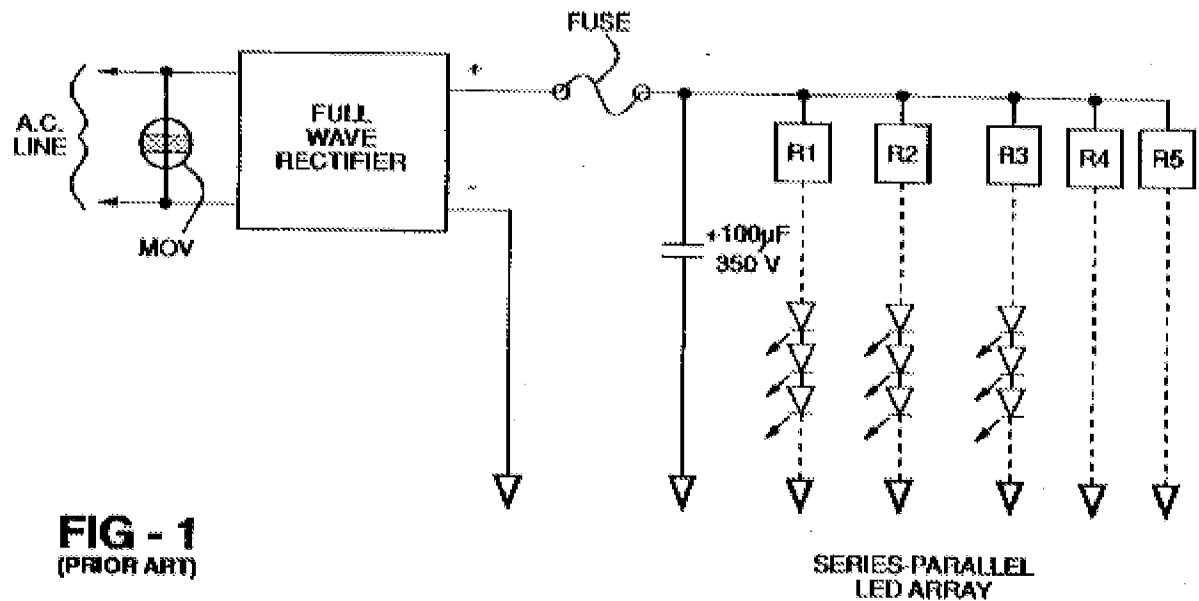


Fig. 8

The Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller discloses that it is known in the art to have a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

APA discloses the use of series-parallel LED array. See figure 1 below.



It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller since the Power Supply Cookbook teaches that the power factor correction circuitry are intended to increase the conduction angle of the rectifiers and to make the AC input current waveform sinusoidal and in phase with the voltage waveform. This in effect causes all the power drawn from the power line is real power not reactive power, thereby power drawn from the power line is much lower than that is drawn by the capacitive input circuit conventionally used. (See 4th paragraph page 195 Power Supply Cookbook) Power Supply Cookbook also teaches a pulse width modulator for use with a power supply circuit to operate the power transistor in both saturated and cutoff states, which is a more efficient way of operation than that of the linear

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regulator since the power device loss is kept to a minimum. (See 4th paragraph page 25 Power Supply Cookbook)

It further would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide circuit reliability and redundancy in the case, one of the LED fails, the other LED's from the LED array would light/work in its place.

Johnson, Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller, Applicant Prior Art (APA) discloses the claimed invention except for having a battery back up, connected to rectifier with a switch over circuit. Head discloses that it is known in the art to provide a half-wave detector to be used to control the dimming circuit. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide half-wave detector to be used to control the dimming circuit Head with the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide a way to extend dimming control range.

9. Claims 24, 28, 32, 37, 38, 41, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (USP 5,463,280) in view of Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller in view of Applicant Prior Art (APA) and

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further in view of and in view of Hildebrand (USP 5,075,601). Johnson discloses the claimed invention (see figure 8) an AC input (102), a rectifier (108), a switching power supply (106) for use with an LED diode array (110), except for the use of series-parallel LED array, a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

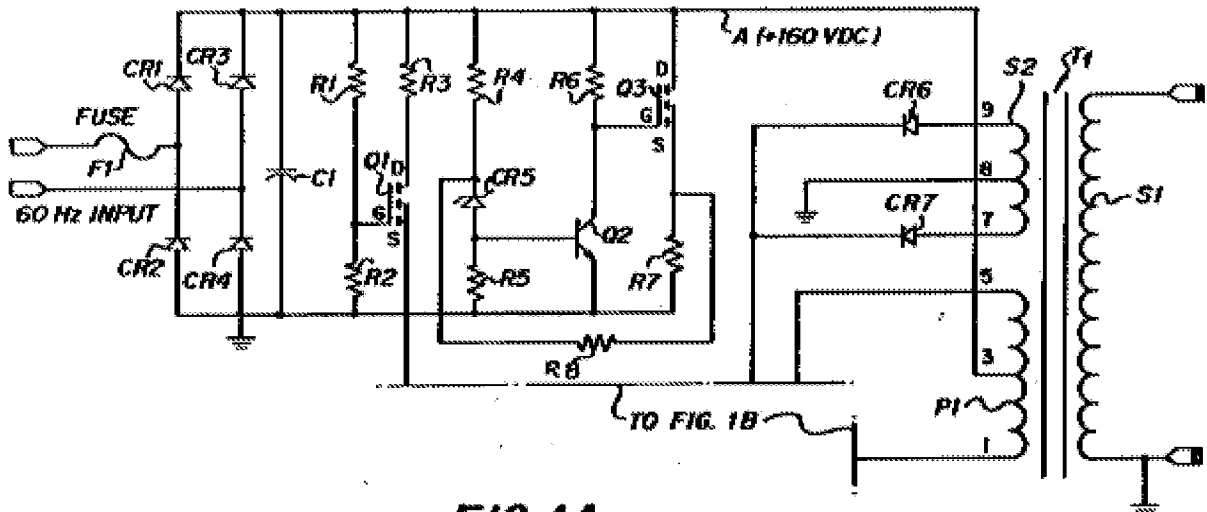
The Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller discloses that it is known in the art to have a power factor correction circuit and a pulse width modulator for use with a power supply circuit.

APA discloses the use of series-parallel LED array. See figure 1.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller since the Power Supply Cookbook teaches that the power factor correction circuitry are intended to increase the conduction angle of the rectifiers and to make the AC input current waveform sinusoidal and in phase with the voltage waveform. This in effect causes all the power drawn from the power line is real power not reactive power, thereby power drawn from the power line is much lower than that is drawn by the capacitive input circuit conventionally used. (See 4th paragraph page 195 Power Supply Cookbook) Power Supply Cookbook also teaches a pulse width modulator for use with a power supply circuit to operate the power transistor in both saturated and cutoff states, which is a more efficient way of operation than that of the linear regulator since the power device loss is kept to a minimum. (See 4th paragraph page 25 Power Supply Cookbook)

It further would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the power supply assembly as taught by Johnson and use a power factor correction circuit and a pulse width modulator for use with a power supply circuit as taught by the Power Supply Cookbook and the Motorola data sheet for the MC 34261 controller and use it with a series parallel LED array as taught by APA, in order to provide circuit reliability and redundancy in the case, one of the LED fails, the other LED's from the LED array would light/work in its place.

Hildebrand discloses that it is known in the art to provide the use of conflict monitor circuit used to help control leakage currents by providing high impedance if such conditions exist. The Hildebrand circuit (see figure 1A) uses a Zener diode (CR5) in combination with transistor (Q2) and that those components correspond to the Zener diode (D5) and the transistor (Q1) of the claimed clamp circuit's "voltage sensing means". Hildebrand circuit uses a transistor (Q3) in combination with resistor (R7) and that those components correspond to the transistor (Q2) and the resistor (R5) of the claimed conflict monitor circuit's "control load means". Then finally, the circuit when the traffic light is off, thereby preventing leakage current, and that it completely removes this resistor (R7) from the circuit when the light is on. This operation corresponds to that of the claimed conflict monitor circuit, which places the resistor (R5) of its "control load means" in the circuit when the light is off and then completely removes that resistor (R5) from the circuit when the light is on.

**FIG. 1A**

An electrical input for coupling to AC source through solid state switch (Q1), with transistor in series connection (Q2) the transistor is bias by diode (Cr5), is conductive when the solid state switch is off. See column 4, lines 1-26.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the device of Johnson in view of Power Supply Cookbook and Motorola data sheet and provide an conflict monitor circuit/clamp circuit as taught by Hildebrand, in order to lessen the effects of current leakage inherent to LED circuitry and have a more dynamic response to this recurring problem.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Q. Vu whose telephone number is (571) 272-2088. The examiner can normally be reached on Monday-Thursdays, 8:00AM- 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on (571) 272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*/Bao Q. Vu/
Primary Examiner, Art Unit 2838
August 7, 2008*